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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/597,752	08/07/2006	Horst Greiner	DE040041	5798

24737 7590 12/17/2010
PHILIPS INTELLECTUAL PROPERTY & STANDARDS
P.O. BOX 3001
BRIARCLIFF MANOR, NY 10510

EXAMINER	
GRAMLING, SEAN P	
ART UNIT	PAPER NUMBER
2875	
MAIL DATE	DELIVERY MODE
12/17/2010	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

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BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

Application Number: 10/597,752
Filing Date: August 07, 2006
Appellant(s): GREINER, HORST

William S. Francos
For Appellant

EXAMINER'S ANSWER

This is in response to the appeal brief filed September 17, 2010 appealing from the Office action mailed April 13, 2010.

(1) Real Party in Interest

A statement identifying by name the real party in interest is contained in the brief.

(2) Related Appeals and Interferences

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

(3) Status of Claims

The following is a list of claims that are rejected and pending in the application:

Claims 1-12 are pending. Claims 1-12 are rejected.

(4) Status of Amendments After Final

The examiner has no comment on the appellant's statement of the status of amendments after final rejection contained in the brief.

(5) Summary of Claimed Subject Matter

The examiner has no comment on the summary of claimed subject matter contained in the brief.

(6) Grounds of Rejection to be Reviewed on Appeal

The examiner has no comment on the appellant's statement of the grounds of rejection to be reviewed on appeal. Every ground of rejection set forth in the Office action from which the appeal is taken (as modified by any advisory actions) is being maintained by the examiner except for the grounds of rejection (if any) listed under the

subheading "WITHDRAWN REJECTIONS." New grounds of rejection (if any) are provided under the subheading "NEW GROUNDS OF REJECTION."

(7) Claims Appendix

The examiner has no comment on the copy of the appealed claims contained in the Appendix to the appellant's brief.

(8) Evidence Relied Upon

6,345,903	KOIKE	02-2002
6,404,131	KAWANO	06-2002

(9) Grounds of Rejection

The following ground(s) of rejection are applicable to the appealed claims:

Claims 1 and 4-12 are rejected under 35 U.S.C. 102 (b) as being anticipated by *Koike et al* (US 6,345,903).

Regarding claim 1, Koike discloses a luminous body comprising a housing (collectively 12 and 27, see Figure 8) with a light emission surface (top surface of element 27) and a plurality of light sources 15 arranged in the housing, wherein the housing comprises at least a first optical medium 27 with a first optical scattering power into which light of the light sources is coupled; and a plurality of second optical medium elements 25 with a second optical scattering power disposed in the housing, wherein each of the second optical medium elements comprises a plurality of particles, and each of the second medium elements is disposed over a respective one of the light sources 15 (see Figure 2-3 and 8 and column 4, line 53 through column 6, line 13).

Regarding claim 4, the second optical medium 25 in Koike is introduced into a region between at least one light source 15 and the light emission surface (see Figures 3 and 8).

Regarding claim 5, the first optical medium 25 in Koike is an optical waveguide plate and the light sources 15 are arranged in at least one cavity of the optical waveguide plate (see Figures 3 and 8).

Regarding claim 6, the scattering power of the second optical medium 25 in Koike is such that it compensates at least substantially for the reduction in the flow of

the light in the first optical medium 27 (see Figure 3 and column 4, line 53 through column 6, line 13).

Regarding claim 7, the second optical medium 25 in Koike is introduced into at least one region between at least one cavity and the light emission surface (see Figure 3).

Regarding claim 8, the second optical medium 25 in Koike comprises light-scattering particles (see Figure 3 and column 5, lines 39-67).

Regarding claim 9, the light-scattering particles in Koike are globules with an optical refractive index different from that of the surrounding material (see Figure 3 and column 5, lines 39-67).

Regarding claim 10, this limitation relates to formation of the light-scattering particles, and it has been held that the method of forming the device is not germane to the issue of patentability of the device itself. Accordingly, this limitation is given no patentable weight.

Regarding claim 11, the light propagating in each of the second optical medium elements 25 is at least substantially coupled thereinto from the first optical medium 27 (see Figure 3).

Regarding claim 12, the scattering power of at least one of the media 27 or 25 influences the flow of light in the housing and a predefinable brightness distribution of light over the light emission surface is achieved (see Figure 3 and column 4, line 53 through column 6, line 13).

Claims 2 and 3 are rejected under 35 U.S.C. 103(a) as being unpatentable over *Koike et al* (US 6,345,903) and *Kawano et al* (US 6,404,131).

Regarding claims 2 and 3, Koike does not specifically teach a layer that reflects on both sides which screens of at least substantially the direct incidence of light from light source 15 to the second optical medium 25. However, Kawano specifically teaches a layer 10 that reflects on both sides which screens of direct incidence of light from a light source 5 to an optical medium (see Kawano, Figures 2 and 5). Accordingly, it would have been obvious to one of ordinary skill in the art at the time the invention was made to position a reflective layer between the second optical medium 25 and light source 15 in order to direct the light laterally through the first optical member 27 in order to more uniformly distribute light along the emission surface.

(10) Response to Argument

Regarding claim 1, Examiner respectfully disagrees with Appellant's submission that each of the second optical medium elements 25 in Koike do not comprise "a plurality of particles". The word "particle" is defined as "one of the extremely small constituent of matter, as an atom or nucleus (see www.dictionary.com, entry 2a), or alternatively "a very small bit of matter" (see Merriam-Webster Dictionary, page 361, entry 1, copyright 2005). Under either of these definitions, Examiner respectfully submits that each of the optical medium elements 25 in Koike comprise "a plurality of particles".

Koike teaches in column 5, line 39-47 that the second optical medium element 25 is a resin mixed with a wavelength-converting material comprised of "a fluorescent dye, a fluorescent pigment or the like." Examiner first submits that a "pigment" is generally known to be in powder form, thus the constituent powder particles of the "fluorescent pigment" can by themselves be considered "a plurality of particles". Accordingly, each of the second optical medium elements 25 in Koike is comprised of "a plurality of particles".

Alternatively, Examiner submits that the exemplary fluorescent dyes or pigments that are taught Koike all comprise "a plurality of particles". Koike specifically teaches that the fluorescent dyes added to the resin may be an organic phosphor "such as fluorescein, rhodamine or the like", and teaches that the fluorescent pigments added to the resin may be an inorganic phosphor "such as calcium tungstate or the like" (see column 5, lines 48-52). Examiner chooses to focus on the molecular composition of "fluorescein" which is $C_{20}H_{12}O_5$. Thus, fluorescein is comprised of twenty carbon atoms, twelve hydrogen atoms and five oxygen atoms. Under either definition above, an atom is "a particle", thus fluorescein comprises "a plurality of particles". Accordingly, since fluorescein is added to the resin to form the second optical medium elements 25, Examiner submits that each of the second optical medium element 25 in Koike comprise "a plurality of particles".

Examiner additionally submits that each of these carbon, hydrogen and oxygen atoms in fluorescein comprise at least one nucleus, proton, neutron and electron. Again, under either of the definitions above, the nucleus, proton, neutron and electron of

the atoms is "a particle", and thus fluorescein is comprised of "a plurality of particles". Accordingly, Examiner submits that each of the second optical medium elements 25 in Koike comprises "a plurality of particles".

Regarding claim 9, for similar reasons, Examiner respectfully disagrees with Appellant's submission that the "plurality of particles" in Koike are not "globules with an optical refractive index different from that of the surrounding material". The fluorescent dyes or pigments which are added to the surrounding material (the resin) in Koike have a different optical refractive index from the resin and serve to scatter the light emitted from light emitting element 15 during conversion of the light to a light of a longer wavelength (see column 5, lines 41-54). Additionally, whether the "plurality of particles" within the second optical medium elements 25 in Koike are defined as the constituent powder particles of the fluorescent pigment or the nuclei of the atoms of fluorescein, the plurality of particles can be considered "globules" in that they are "a tiny globe or ball" (see Merriam-Webster Dictionary, page 211, entry 1, copyright 2005) or are "a small spherical body" (see www.dictionary.com, entry 1). Accordingly, the plurality of particles formed within the resin of Koike are "globules with an optical refractive index different from that of the surrounding material".

(11) Related Proceeding(s) Appendix

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

/SANDRA L. O SHEA/

Supervisory Patent Examiner, Art Unit 2875

/SPG/

December 12, 2010.

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